

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2004/001917

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G01S 11/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7, G01S, G01B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean patent applications for inventions published since 1975. Korean utility model applications published since 1975.
Japanese utility models applications published since 1975.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WPI, KIPASS(Searching system of Korean Intellectual Property Office), INSPECT "ultrasonic, distance*,measur*,digital*,pulse*"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 5,197,019 A (ASULAB SA (CH)), Mar.23, 1993 See detailed description and claims. See figure2 and fig.10- fig.15	1 - 6 7
Y A	JP 8-94740 A (KOYO SEIKO CO LTD (JP)), Apr.12, 1996 See detailed description and fig. 1- fig.4	1 - 6 7
A	KR 152725 B (HYUNDAI ELECTRONICS IND (KR)), Dec.15, 1998 See detailed description and fig. 2- fig.6	1 - 7
A	JP 6-148316 A (FUJI ELECTRIC CO LTD (JP)), May.27, 1994 See detailed description and fig. 1- fig.4	1 - 7

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search

08 DECEMBER 2004 (08.12.2004)

Date of mailing of the international search report

13 DECEMBER 2004 (13.12.2004)

Name and mailing address of the ISA/KR



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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2004/001917

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5,197,019 A	Mar.23, 1993	EP 0 409 054 A1 JP 3-57907 A	Jan.23, 1991 Mar.13, 1991
JP 8-94740 A	Apr.12, 1996	None	
KR 152725 B	Dec.15, 1998	None	
JP 6-148316 A	May.27, 1994	None	